

DREDGE SAMPLING

UPPER & LOWER LAKES, YAPHANK & CANAAN LAKE, E. PATCHOGUE TOWN OF BROOKHAVEN

**ENVIRONMENTAL
PLANNING
CONSULTING**

*FEASIBILITY & DUE
DILIGENCE ASSISTANCE
REGIONAL & SITE
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ECONOMIC PLANNING
ENVIRONMENTAL SITE
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ENVIRONMENTAL SCIENCE
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WATERSHED MANAGEMENT
& WATER SUPPLY
PERMITTING & PROCESSING*

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Nelson, Pope & Voorhis, LLC (NP&V) along with a team of professionals and scientists, was contracted to conduct a feasibility study for the eradication of aquatic invasive/nuisance plant species which severely impaired water quality, aesthetics and recreational use of the Upper Lake and Lower Lake on the Carmans River in Yaphank, and Canaan Lake on the Patchogue River in North Patchogue. One aspect of the preferred restoration options involved removal of the soft bottom sediments that support aquatic invasive species. In order to determine appropriate disposal/re-use options for the dredge materials, extensive sediment sampling was conducted under the auspices of NYSDEC. A sampling work plan was prepared and approved by NYSDEC followed by collection of soft sediment samples to be analyzed for the presence of specified constituents. Samples were procured in accordance with locations prescribed in the work plan, by trained personnel using decontaminated field equipment, then recorded/labeled and transported to a certified laboratory for analysis. representative core sample of the entire profile of sediment at each location. Additional analysis was performed on pilot soil and water samples for the purpose of determining degradation of acetone (determined to be a natural by-product) over time, as well as water quality of lake water as a function of decreased turbidity (settling). Ultimately, sediments were approved for upland dewatering and return of overflow water back to the lake system without the need for filtration.

